Radio Notes
Radio Industry

Technology Development
- Samuel Morse - Electromagnet and telegraph
- Heinrich Hertz - Radio waves
- Guglielmo Marconi - Wireless telegraph
- Voice over the Air
  - Reginald Fessenden - transmitted voice and record over air
  - Lee De Forest - audion tube (amplified signal and more portable)
  - Experimenters and hobbits start transmitting

Radio Becomes a Mass Media
- 1916, Sarnoff memo at American Marconi (Radio Music Box)
- Scheduled Broadcasts - KDKA in Pittsburgh (Frank Conrad/Westinghouse)
- Chaos in the air - by 1923, 600 licenses
  - Major interference
  - Radio Act of 1912 no criteria for licenses

Regulating Broadcasting
- Why regulate broadcasting?
- 1903 Berlin Radio Conference
- Radio Act of 1912 (Sec. of Commerce)
- Radio Act of 1927 (Federal Radio Com.)
- Federal Communications Act of 1934 (FCC)
- Telecommunications Act of 1996

Economics - How to pay for this?
- Government operation
- Subscription service
- Leasing - common carrier
- Endowment
- Advertising - WEAF in NY

Mass Media
- Early 20's - start of marketing home receivers and by 1930 there were 14 million.
- 1921 RCA and Sarnoff start NBC
CBS soon followed
In a single decade, radio is transformed from a long distance signal devices to a medium to serve the entire nation.
The depression and WWII free entertainment

Challenge of TV
- Radio adapts- Birth of the DJ
- Public Broadcasting
  - 1967 Public Broadcasting Act (CPB)
- Growth of FM
  - Developed by Edwin Armstrong
  - AM almost died, but turned to Talk

Radio Today
- 13,800 radio stations
- 96% of population over 12 listens every week (TV 90%, Paper 76%)
- Inexpensive advertising (10-11% ad $)
- Satellite Radio- Projected last Sept. that by end 2009 about 19 million SiriusXM sub.
- Group Ownership

Bridge Ratings Projections

Ownership Numbers
- Clear Channel Communications- 1,194
- Cumulus Broadcasting Inc.- 305
- Citadel Broadcasting Corp.- 220
- Infinity Broadcasting- 183
- Educational Media Foundation- 118

Organizational Structure

<table>
<thead>
<tr>
<th>General Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Director</td>
</tr>
<tr>
<td>Sales Manager</td>
</tr>
<tr>
<td>Traffic</td>
</tr>
<tr>
<td>News Director</td>
</tr>
<tr>
<td>Engineer</td>
</tr>
<tr>
<td>Music Director</td>
</tr>
<tr>
<td>Salespeople</td>
</tr>
<tr>
<td>Reporters</td>
</tr>
<tr>
<td>Disc Jockey</td>
</tr>
</tbody>
</table>
What Radio Formats People Listen To, 2002

Radio Formats

- Country
- Religion
- News/Talk
- AC (Soft/Mid)
- Classic Rock (Oldies)
- Adult Stand
- Spanish
- CISR (Rock)
- Variety
- Alternative
- Sports
- Urban (R&B)
- Other

Radio Programming-Dayparts
- Morning Drive 6-9
- Midday 9-2
- Afternoon Drive 2-6
- Night 6-12
- Overnight 12-6

Radio Programming- Hot Clock
- :00
- :15
- :30
- :45
Radio Production-Equipment

*Sound is Waves!*
- Amplitude (Db) is the loudness of the wave
- AM (Amplitude Modulation) of the wave.
- Frequency (Hz) is the pitch of the sound.
- FM (Frequency Modulation)

**Microphone Types- Moving Coil**
- Sturdy and Reliable
- Poor Frequency Response
- Works with Electro-Magnetic Energy
- Dynamic Microphone

**Microphone Types- Ribbon**
- Very Delicate
- Good Response, Warm Sound
- Works with Electro-Magnetic Energy
- Dynamic Microphone

**Microphone Types- Condenser**
- Needs External Power
- Excellent Response
- Sometimes too Sensitive
- Stores Electrical Charge- Capacitor

**Microphone Pickup Patterns**

**Microphone- Physical Types**
- Handheld
- Shotgun
- Lavaliere
- Studio
- Wireless
- Parabolic Reflector

**Microphone Connectors**
Cable Handling Tips
- Make sure you have more than you need
- Don’t step on or crimp the cable.
- Coil the cable properly to protect it!

Radio Production-The Studio

The Console - The Nerve Center

A- V.U. Meter
B- Channel Selector
C- Slider Potentiometer
D- Remote/On Button
E- Off Button
F- Cue Channel Light
G- Input Selector

Audio Mixer Board

A- V.U. Meter
B- Main Mix
C- Monitor Volume
D- Slider Potentiometer
E- Mute Button

Studio Components
- Mini-Disc Recorder
- Reel to Reel Player/Recorder
- Cart Machine
**Equipment Handling**
- Need to clean the heads. Why?
- Tape is a plastic strip with chemicals and iron oxides it. These chemicals rub off onto the heads. The chemicals will block the magnetic pulses that form the signal on the tape.

---

**Radio Announcing**

*Communicator’s Role*
- Conduit for Information
- Interpret and Communicate
- Not Announce

*Radio Announcing - 3 P’s*
- Personal
- Professional
- Prepared

*Beyond Voice*
- Understand what saying, meaning and purpose
- Find key words
- Establish mood
- Pace for correct excitement
- Find purpose

*Communicate - DON’T READ*
- Mark copy
- Use conventional US pronunciation for foreign words
- Look for natural phrasing
- NOT WRITTEN WORDS ON PAGE, BUT SPOKEN WORDS ON PAGE.

*Perform before a Microphone*
- Speak across
- Closer for condenser/cardiod
- Same distance
- 4-6 inches away
- Closer in noise
- Back up in hard sell

*Natural Delivery*
- Character motivation
- Watch unnatural pronunciation
- Watch stilted dialogue
- Watch overacting

*Radio Commercial-Special Skills*
- Reading to time
  - Know music phrasing
  - Develop time sense
  - Mark copy
- Compress Copy
  - Music analogy
  - Reading ahead
Radio Commercial Writing

Writing Techniques
- 3 C's- Correct, Concise and Catchy
- Keep eye on what sell and how clearly you sell it
- True Test- If you can’t remember the product the commercial failed
- Don’t make the commercial interesting, make the product interesting.

Scripting Guidelines
- Who is the Audience?
- What is your Product?
- What Appeal to use?
- Ethical
- Emotional
- Logical
- Mention Sponsor Name-- 2/30  3/60
- Avoid Personalizing
- K.I.S.S.
- Realize who it is for...

Commercial Organization
- Audience attention- humor, quest, conflict
- Hold interest- construct min-drama, conflict
- Create impression of problem existing
- Plant idea problem solved by product
- Finish story with appeal or motivation to action
- Monroe’s Motivated Sequence

Script Format:

![Script Format Image]

Digital Audio Editing

Linear vs Non-Linear editing
- Linear
- Non-Linear

Digital Editing Terminology
- AIFF (mac) or WAV (pc) or MP3
- Storage: Zip...Jaz...CD...DVD
- One minute stereo audio= 10mb
- Waveform
- Scrubbing
Transitions
- Segue and Cut
- Crossfade
- Fade In/Fade Out
- Creates pace and time references

Editing Needs/Guidelines
- Ambience
- Most sounds have natural decay
- Music resolutions
- Long periods of editing can reduce ability to perceive or remember the details
- Take regular Ear Breaks!